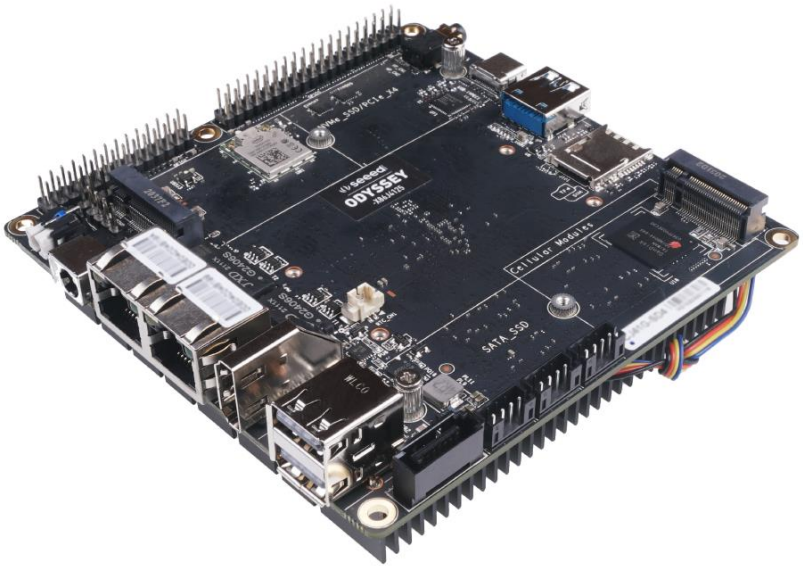
ODYSSEY - X86J4125864 Win10 Enterprise Activated Mini PC (Linux and Arduino Core) with 8GB RAM + 64GB eMMC / Dual Gigabit Ethernet NICs

SKU

102110541

ODYSSEY - X86J4125 allows you to simply build Edge Computing applications with powerful CPU and rich communication interfaces. The ODYSSEY - X86J4125, based on Intel Celeron J4125, is a Quad-Core 2.0GHz CPU that bursts up to 2.7GHz. There is also an onboard ATSAMD21 Core, an ARM Cortex-M0+ MCU that allows you to program Arduino on the x86 platform.



Note

- Component shortages have resulted in long lead times for ODYSSEY - X86J4125864 Win10 Enterprise Activated, we recommend ODYSSEY - X86J4125864 Win11 Enterprise Activated

Note

The first batch of the ODYSSEY - X864105 is ReComputer α series, hence the label is ReComputer α on the board, whilst the functionality of the boards is identical.

Please note that when you have powered on but the fan does not rotate, it may be due to the following reasons.
1. The CPU itself does not have a temperature sensor. The temperature sensor is on the PCB, close to the CPU.
2. The temperature threshold set in the BIOS is based on the temperature of the PCB, not the temperature of the CPU.
3. There is a delay in the CPU temperature transfer to the PCB.
At this time, please try to let the CPU run at full load for 20 minutes.

Tip

This version of ODYSSEY - X86J4125864(Win 10 Enterprise Activated) has 64GB onboard eMMc storage and pre-installed Windows 10 Enterprise.

Key Feature

- **Intel® Celeron® J4125**, Quad-Core 2.0-2.7GHz
- Dual-Band Frequency 2.4GHz/5GHz WiFi
- **Intel® UHD Graphics 600**
- Dual Gigabit Ethernet
- Integrated **Arduino Coprocessor ATSAMD21 ARM® Cortex®-M0+**
- **Raspberry Pi 40-Pin Compatible**
- 2 x M.2 PCIe (B Key and M Key)
- Support Windows 10 & Linux OS
- Compatible with Grove Ecosystem

Description

Edge Computing devices are playing an increasingly important role in the field of IoT. Nowadays, a computer is not just a big rectangular black box under the desk, or a small portable device working on your knees. Computers are ubiquitous devices that span calculating, communicating, and data storage. Based on this definition, here we would like to introduce our new product – the **ODYSSEY - X86J4125**.

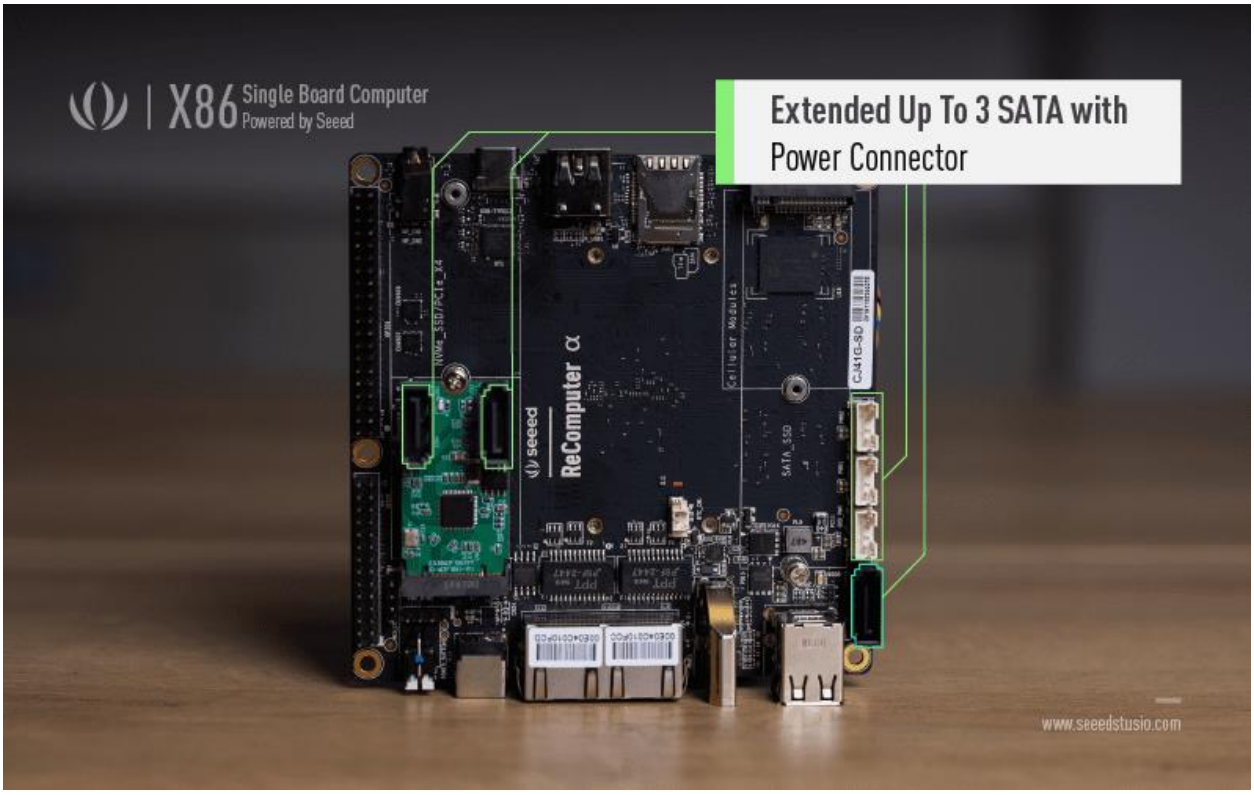
ODYSSEY is a series of SBC (Single Board Computer), allowing you to build Edge Computing applications with ease. The ODYSSEY - X86J4125, based on Intel Celeron J4125, is a Quad-Core 2.0GHz CPU that bursts up to 2.7GHz. It includes all the powerful features of Mini PC such as including an 8GB LPDDR4 RAM, 64GB eMMC Storage(optional), onboard Wi-Fi/BLE, Dual Gigabyte Ethernet Ports, Audio Input and Output, USB Ports, HDMI, SATA Connectors and PCIe, however, within a cost-effective price. With simple connections to Mouse, Keyboard and Monitor to ODYSSEY - X86J4125, you will get a Desktop Mini PC right away. With eMMC versions, you even have the Windows 10 Enterprise pre-installed!

Just simply connect to a mouse, a keyboard and a monitor with the ODYSSEY – X86J4125, you will get a powerful Desktop Mini PC that can run Windows and Linux OS.

With **Dual Gigabit Ethernet**, you can build the OpenWrt project and pfSense with ease.

There are also **two of M.2 PCIe (B Key and M Key)**, which enables various expandable capabilities including Hard Drives, SSD, GPU, 4G, and even 5G cellular network connectivity.

You can extend up to **three SATA** with the power connector to build your NAS server.



With ODYSSEY - X86J4125, you can build your own NAS (Network-Attached Storage), your high-performance Virtual Router, or a 4G LTE Gateway in your IoT applications. There is an onboard ATSAMD21 Core, an ARM Cortex-M0+ MCU that allows you to program Arduino on the x86 platform. The Raspberry Pi compatible 40-Pin provides hardware compatibility to most of the Pi HATs in the market. All of these features providing endless possibilities of using the ODYSSEY - X86J4125.

Currently, the ODYSSEY - X86J4125 can work with the Grove Base HAT for Raspberry Pi and GPIO Groves.

The ODYSSEY - X86J4125 is more than just a computer, with the Arduino Co-processor onboard, it can be used to connect with sensors, gyroscope, and much more. Why don't you start exploring your IoT journey from here! We have over 300 Grove modules and Sensors for you to choose from.

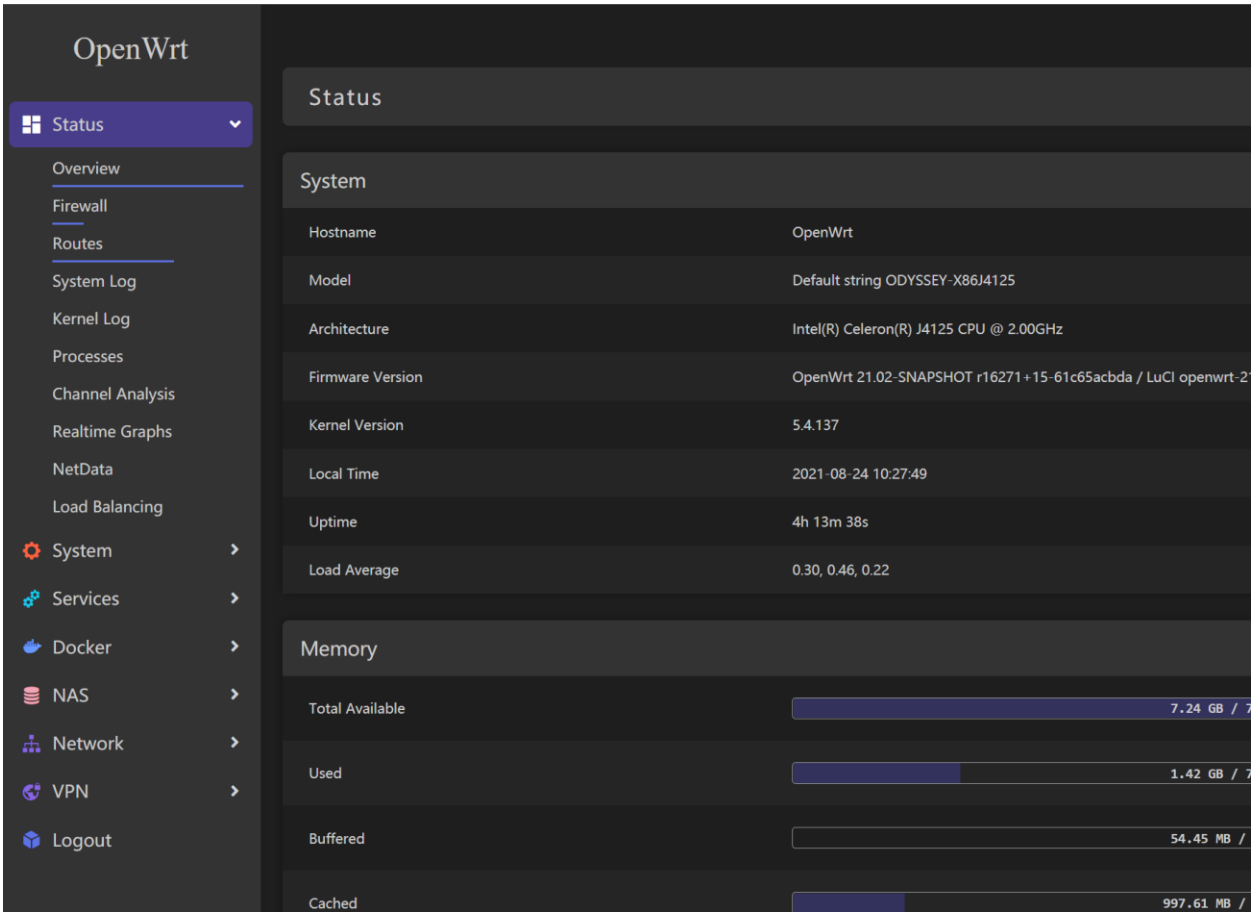
At Seeed, you can also design your solution all in one page where you choose the desired SBC, any compatible mission board (HATs, expansions) that you want, I/O modules, and nicely place them in the suitable enclosures/cases such as re_computer Case. Rest assured, as we have tested full compatibility for all of the products listed on the page. Try it now here and save you time to find hardware compatibility!

OpenWrt Supported

You can flash OpenWrt firmware to this board and turn this board into a software router!

OpenWrt®
WIRELESS FREEDOM

OpenWrt is an open-source Linux operating system that runs on embedded devices/ routers. It offers more features, performance, and security than a traditional router. It has a filesystem that's fully writable and includes a package management system. You can make use of these packages to suit your applications in various ways. Once you connect this board to your home network and access the router from a web browser, you will be presented with a beautiful and interactive dashboard as follows.

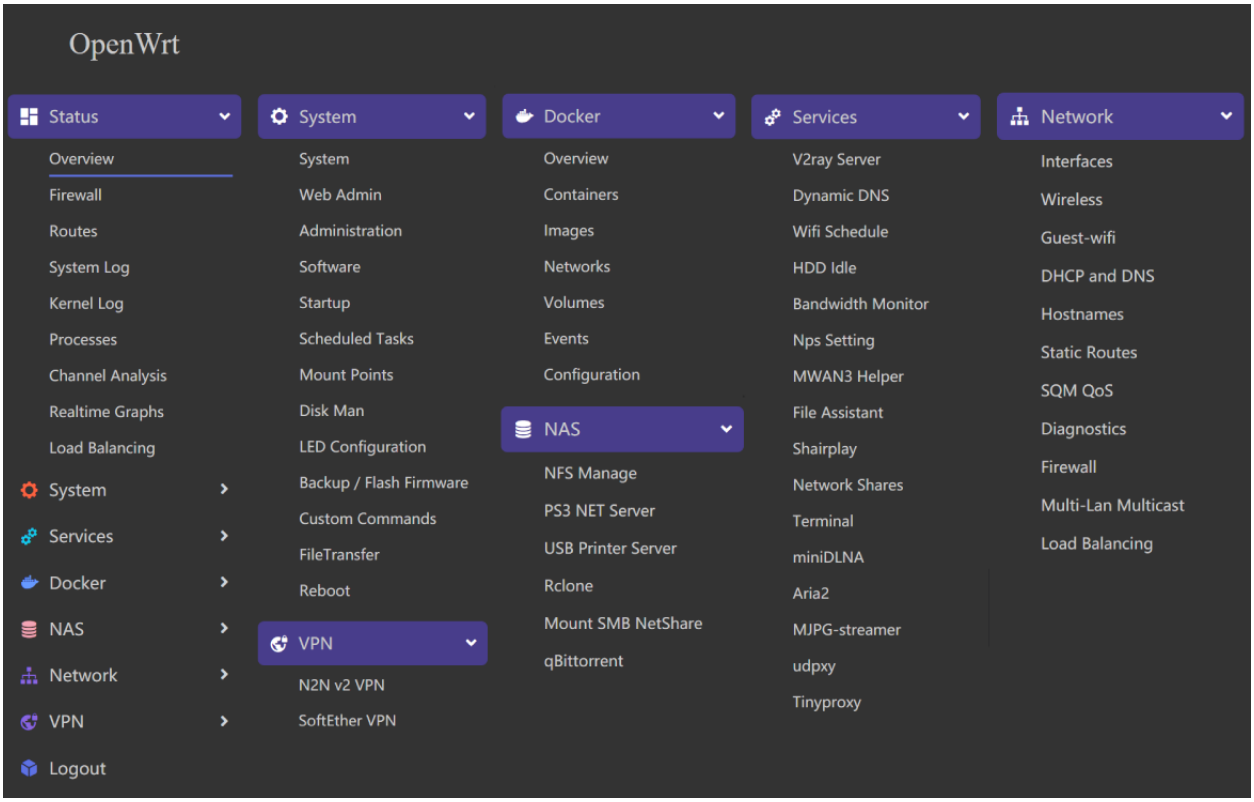


You can navigate in this dashboard, and you will have access to a bunch of features such as:

- Increase overall network performance when multiple devices are connected
- Share files between devices via an external storage drive connected directly to the router
- Increase network security
- Run a BitTorrent client from the router
- Connect a printer directly to the router to create a networked printer
- Limit bandwidth usage of a particular device in the network
- Active queue management
- Real-time network monitoring
- Create Dynamic DNS
- Set Up a VPN client or server

- Block ads on the network

By utilizing the above features, you will have unlimited possibilities with this mini router!



Supports From the Community

Comparison Tables of ODYSSEY - X86J4125

Model	CPU	Core	Operating System	Memory	Fan
ODYSSEY - X86J4125864	Intel Celeron J4125	4 Core 2.0GHz, Burst to 2.7GHz	Windows 10 Enterprise (Unactivated)	64GB eMMC	Built-in
ODYSSEY - X86J4125864(Win10 Enterprise Activated)	Intel Celeron J4125	4 Core 2.0GHz,	Windows 10 Enterprise Activated	64GB eMMC	Built-in

Model	CPU	Core	Operating System	Memory	Fan
		Burst to 2.7GHz			
ODYSSEY - X86J4125800	Intel Celeron J4125	4 Core 2.0GHz, Burst to 2.7GHz	No Operating System	N/A	N/A

Specification

Components	ODYSSEY - X86J4125
Processor	Intel® Celeron® J4125 (Frequency: 2.0 - 2.7GHz)
Coprocessor	Microchip® ATSAMD21G18 32-Bit ARM® Cortex® M0+
Graphics	Intel® UHD Graphics 600 (Frequency: 250 – 750MHz)
Memory	LPDDR4 8GB
Wireless	Wi-Fi 802.11 a/b/g/n/ac @ 2.4/5 GHz HT160
Networking	Intel® I211AT PCIe Gigabit LAN, Supports Wake-On-LAN, Supports PXE
Audio	Microphone + headphone Combo Connector
Headers	1 × 40-Pin header compatible with Raspberry Pi 1 × 28-Pin header (SAMD21G18) 1 × Front Panel Audio Connector

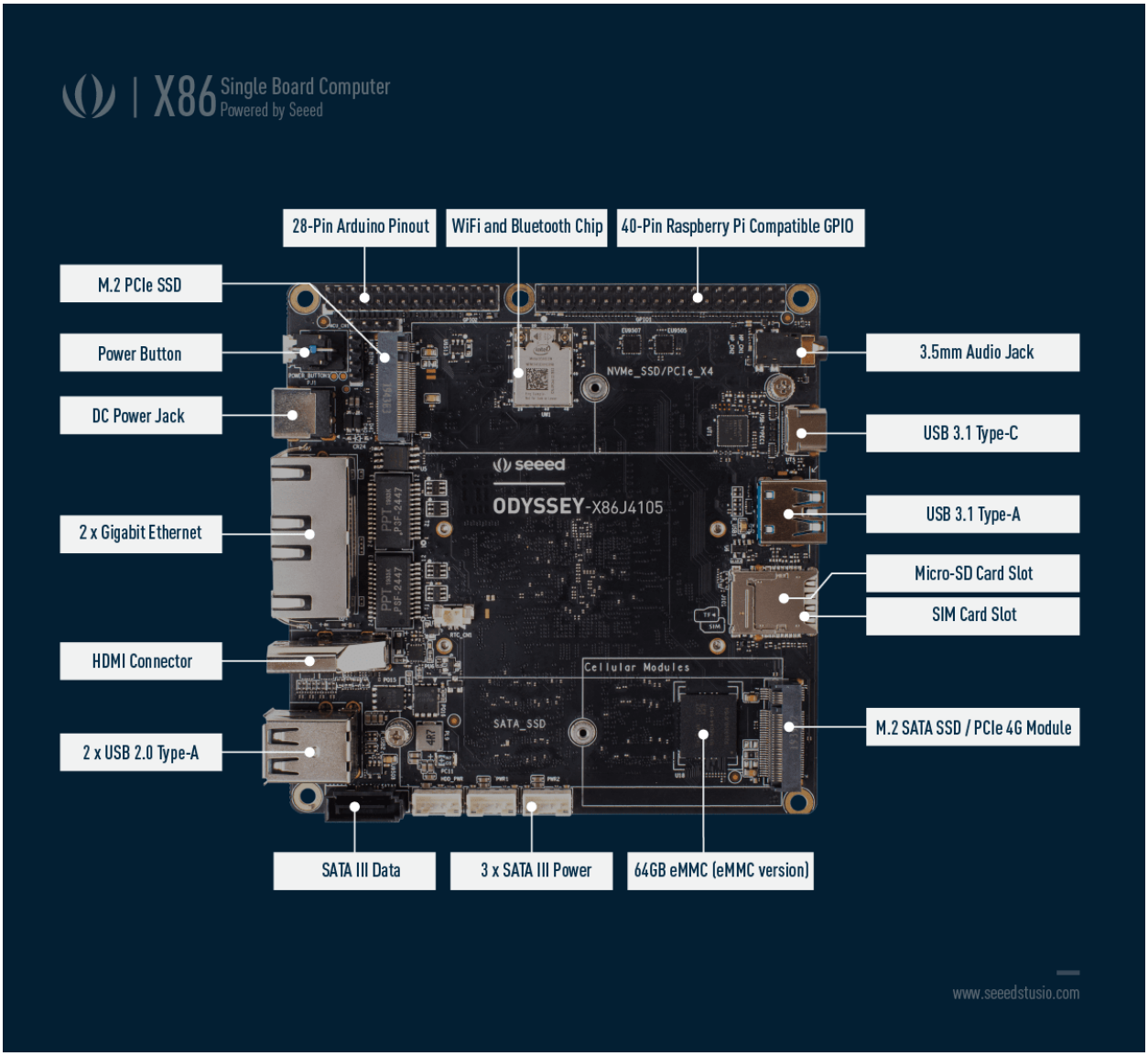
Components	ODYSSEY - X86J4125
	1 × 4-Pin herder (UART function from SAMD21G18) 1 × Fan Port (4 pin 1.25mm PWM 5V） 3 × 4-Pin SATA Power Connector 1 × 4-Pin herder (Power and Switch)
USB	USB 2.0 Type-A x2, USB 3.1 Type-A x1, USB 3.1 Type-C x1
Video Interfaces	HDMI2.0a: Up to 4096x2160 @ 60Hz 24bpp / DP1.2a: Up to 4096x2160 @ 60Hz 24bpp
Expansion Slots	M.2(Key B, 2242/2280): SATA III, USB2.0, UIM; M.2 (Key M, 2242/2280): PCIe 2.0 ×4; Micro SD card Socket; SIM Card Socket; SATA III
RTC	JST 1.0 CR2032 3V
TPM	Built-in TPM (2.0)
Power	DC Jack 5.5/2.1mm or Type-C PD; DC Jack input: 12-19V DC; Type-C input: 15V DC
Dimensions	110x110mm
Certifications	FCC, CE, TELEC
Operating temperature	0°C~75°C

Applications

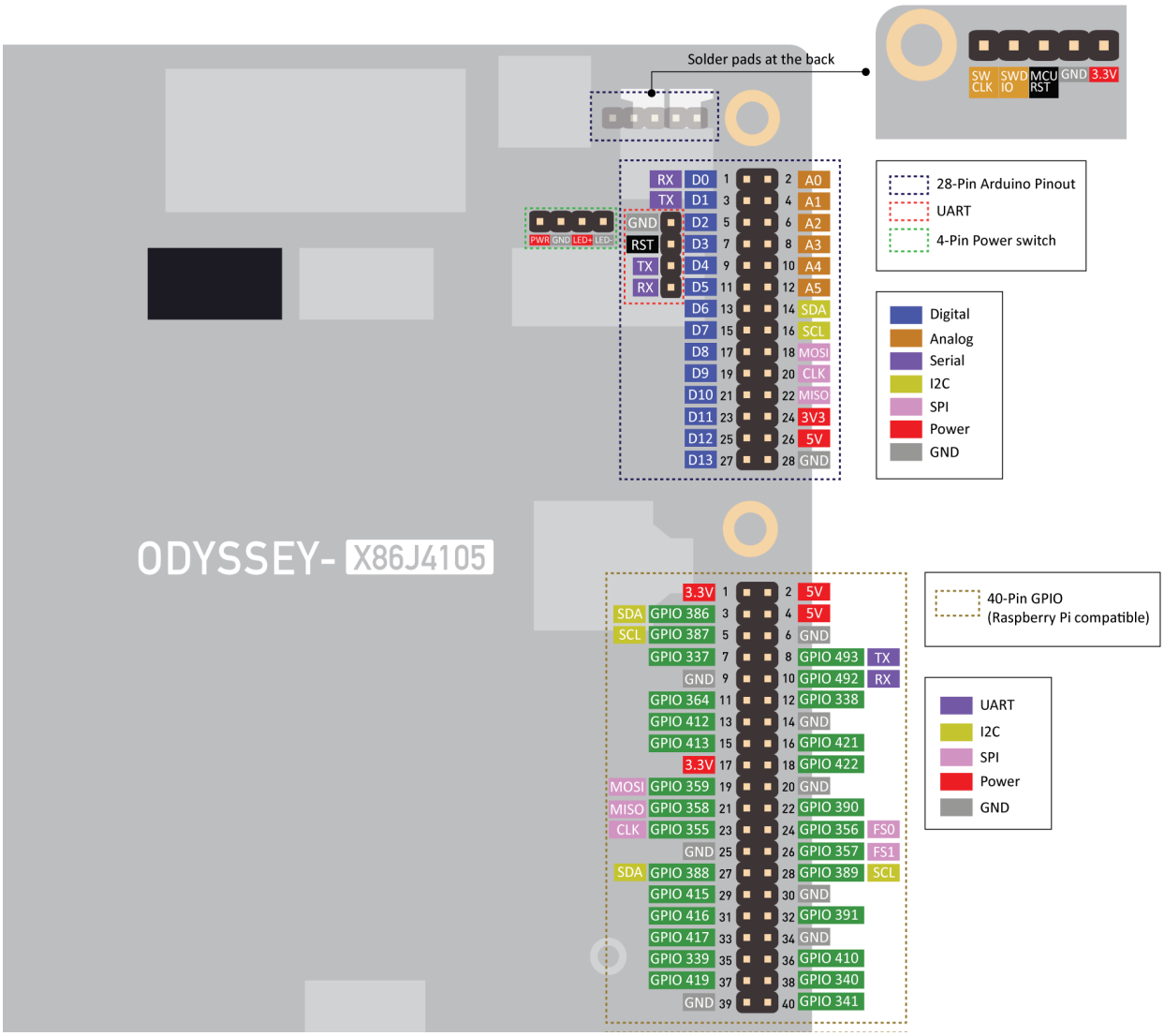
- Mini PC
- NAS (Network-Attached Storage)

- Edge Computing
- Router
- Robotics
- Industrial Applications
- Media Center
- IT Industry
- Educational Fields
- Thin Client
- Server Cluster
- IoT Gateway

Hardware Overview



Pinout Diagram



Part List

- ODYSSEY - X86J4125 x 1
- User Manual x 1
- International Power Adapter
- SATA Cable x 1
- Antenna x 2
- RTC Battery x 1
- Heat Sink(Assembled)

- Cooling Fan (Assembled) (Included in eMMC versions)

Note

If you are looking for open source SBC for commercial and industrial needs. Seeed provides customization services based on BeagleBone series boards. Seeed Studio BeagleBone® Green(BBG) and Seeed Studio BeagleBone® Green Wireless (BBGW) provide more stable industrial deployment scenarios.